

Remarks

The non-final Office Action dated February 20, 2009, indicted that the § 102 rejections and the prior art rejections based on the Chong and Schrantz references have been withdrawn and listed the following rejections: claims 1-10 and 21-28 stand rejected under 35 U.S.C. § 102(b) over the Haberger reference (U.S. Patent No. 6,417,075); and claims 9 and 27 stand rejected under U.S.C. § 103(a) over the ‘075 reference. Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

Applicant respectfully traverses the § 102(b) rejection of claims 1-10 and 21-28 and § 103(a) rejection of claims 9 and 27 because the ‘075 reference does not correspond to aspects of the claimed invention directed to a carrier having a surface and pillar extensions that extend from the surface, with the pillar extensions having rounded corners that meet the surface of the carrier. The use of pillar extensions having rounded corners improves the stress and strain relaxation by burying the corners in the carrier so that the corners are not located near the interface between the carrier and the intermediate layer. *See, e.g.*, Paragraph 0014 of Applicant’s specification. The rounded corners of the pillar extensions provide a gradual interface to the carrier, which further reduces stress. *See, e.g.*, Paragraph 0029 of Applicant’s specification. In an effort to facilitate prosecution, Applicant has amended claim 1 to recite that the rounded corners form a gradual interface between the sidewalls of the pillar extensions and the surface of the carrier, and that the rounded corners reduce stress originating from the dilatation mismatch. Applicant submits that such aspects are not disclosed by the ‘075 reference.

Specifically, the ‘075 reference does not teach that wafer 2 has pillar extensions that have round corners that meet the surface of the wafer 2. *See, e.g.*, Figs. 1a and 2a, and Col. 4:40-53 (cited by the Examiner). Applicant previously brought to the Examiner’s attention the fact that the ‘075 reference does not teach pillar extensions having rounded corners, as claimed. *See* page 5 of the Response dated January 28, 2009. In the instant Office Action, the Examiner continues to improperly assert that the ‘075 reference teaches rounded corners based on the same portion of the ‘075 reference (*i.e.*, Col. 4:40-53) without responding in any manner to Applicant’s previous arguments as required. *See, e.g.*, M.P.E.P. § 707.07(f) (“Where the applicant traverses any rejection, the examiner should,

if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.”). Applicant respectfully maintains that Col. 4:40-53 does not make any mention of pillar extensions having rounded corners that meet the surface of the carrier. The following discussion particularly addresses the ‘075 reference’s lack of teaching pillar extensions having rounded corners.

First, Applicant notes that Col. 4:40-53 of the ‘075 reference does not address the formation of pillar extensions in the wafer, but instead concerns the channel shaped recesses (*i.e.*, channels 5) that are formed in the oxide on top of the wafers. Where the ‘075 reference teaches that structures can be formed into the substrate (*i.e.*, the asserted pillar extensions), these structures are taught by the ‘075 reference as not having rounded corners as is shown in the left most blow-up of the channels 5 in Figure 3. *See, also* Col. 7:44-48. In response to the Examiner’s assertion on page 3 of the instant Office Action that “rounded corners naturally occur during forming the structures through wet etching,” Applicant notes that the ‘075 reference expressly teaches that the recesses/channels 5 that are formed in the oxide 3 can meet the surface of the wafer at an angle of 90° (among other orientations), which do not result in rounded corners. *See, e.g.*, Figure 3, Col. 4:40-53 Col. 7:5-8 and Col. 7:44-48. Thus, any assertion of inherency with regard to the ‘075 reference teaching rounded corners would be improper. *See, e.g.*, M.P.E.P. § 2112. Applicant further submits that the ‘075 reference does not teach or suggest pillar extensions having rounded corners that form a gradual interface between the sidewalls of the pillar extensions and the surface of the carrier to reduce stress originating from the dilatation mismatch, as claimed.

In view of the above, the ‘075 reference does not correspond to the claimed invention. Accordingly, the § 102(b) rejection of claims 1-10 and 21-28 and § 103(a) rejection of claims 9 and 27 are improper and Applicant requests that they be withdrawn.

Applicant further traverses the § 102(b) rejection of claim 24 because the ‘075 reference does not correspond to aspects of the claimed invention directed to the second material being thermally oxidized semiconductor material, as acknowledged by the Office Action. The Office Action then erroneously asserts that these limitations are product by process limitations. However, claim 24 does not contain any process steps and it is not directed to how the second material is formed. Instead, claim 24 recites what the second material is (*i.e.*, thermally oxidized semiconductor material). As such, the

Office Action has improperly ignored these aspects of claim 24, which are acknowledged as not being taught by the '075 reference. As the Office Action has failed to present correspondence to claim 24, the § 102(b) rejection of claim 24 is improper and must be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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